

Milling Fixture with Floating Clamps and Locator. — In

the design of milling fixtures a point which is of extreme importance is that of so arranging the various clamping devices that they will not produce undue strain or distortion. In addition to this, all members used must be of sufficiently heavy construction to avoid chatter. The work *A* as illustrated in Fig. 4 has been previously chucked and it is desired to mill the slot *H* at its upper end in a certain relation to the reamed hole. The two portions of the casting *I* and *K* are left rough, and as a consequence it becomes necessary to arrange the clamps and locating points so that they will equalize the inequalities of the casting. The body of the fixture *B* is cast iron and of somewhat heavy section, being tongued at its lower side to fit the slot in the table and held down in the usual manner by the T-bolts *C* at each end. The work is placed on the adjustable plunger *D* which is pulled back by the pin *T* passing through the outer end. A stop collar *F* is forced on the end of the shank *E* in order to prevent too great a movement of the plunger. The upper end of the work is swung over against the stop-screw *G* which is set in a boss in the rib *O* that ties the two sides of the fixture together. One of the rough sides *K* of the casting strikes against the rocker *M* which automatically adjusts itself to the variation in the casting. It will be noted that the fixture is bored out radially and slightly under-cut to fit this rocker, and that it is held in place by the screws *N*. The holes which these screws enter are slightly enlarged to permit the necessary movement. Two steel pins *U* bear against the other side of the rough casting, these pins being set in swinging floating clamp *Q*, the provision for float being supplied by an over-sized hole at *J*?. The set-screw *S* bears against the center of this rocking clamp and gives the pressure necessary to hold the work. A small coil spring throws the clamp back out of the way when assembling or disassembling the work. The direction of the cut in machining the slot is such that the pressure comes against the solid body of the casting and not against the clamp. Clamping members which float are found on various designs of fixtures.